

ASBS

Australian  
Systematic  
Botany  
Society



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# AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

## Office Bearers

### President

#### Dr T. J. Entwistle

National Herbarium of Victoria,  
Birdwood Avenue,  
South Yarra, Vic. 3141  
tel.: (03) 92522313  
fax: (03) 92522350  
email: entwistle@botany.unimelb.edu.au

### Vice President

#### Dr C. J. Puttock

Australian National Herbarium,  
GPO Box 1600,  
Canberra, ACT 2601  
tel.: (02) 62465497  
fax: (02) 62465249  
email: chrisp@pican.pi.csiro.au

### Secretary

#### Mrs R. M. Barker

Botanic Garden of Adelaide  
and State Herbarium,  
North Terrace,  
Adelaide, SA 5000  
tel.: (08) 82282348  
fax: (08) 82150078  
email: rbarker@denr.sa.gov.au

### Treasurer

#### Mr J. Clarkson

Queensland Herbarium,  
PO Box 1054,  
Mareeba, Qld 4880  
tel.: (070) 928445  
fax: (070) 923593  
email: clarksj@dpi.qld.gov.au

### Councillor

#### Dr T. Macfarlane

Western Australian Herbarium,  
Dept Conservation & Land Management,  
Manjimup, WA 6258  
email: terrym@calm.wa.gov.au

### Councillor

#### Dr P. Weston

National Herbarium of New South Wales,  
Mrs Macquaries Road,  
Sydney, NSW 2000  
email: peter@rbgsyd.gov.au

## Affiliate Society

Papua New Guinea Botanical Society

### Australian Botanical Liaison Officer

#### Mr K. Hill

Herbarium,  
Royal Botanic Gardens, Kew,  
Richmond, Surrey TW9 3AB,  
England  
tel.: 44-181-3325270  
fax: 44-181-3325278  
email: ablo@rbgkew.org.uk

### Public Officer and Membership Officer

#### Mr A. Lyne

Australian National Herbarium,  
Centre for Plant Biodiversity Research  
GPO Box 1600,  
Canberra, ACT 2601  
tel.: (02) 62465508  
fax: (02) 62465249  
email: al@anbg.gov.au

## PRESIDENT'S REPORT

### **Hansjörg Eichler Scientific Research Fund**

Twelve submissions were received by the extended deadline of 14 July, and the successful applicant(s) will be announced at the Annual General Meeting in Adelaide. We hope to have available at least \$2000 each year to support research in Australian systematics, particularly that of students (graduate and post-graduate) and newly established botanists. Application forms will be available in the first few months of each year. Once tax deductibility has been established I will make a renewed call for donations to the Fund.

### **Newsletter Editorship**

It is now official. The editorship of the ASBS newsletter will migrate thirty degrees of latitude southwards. Bob Hill, head of the Department of Plant Science at the University of Tasmania in Hobart, will commence as editor for the first issue of 1998. Having submerged my hands in many of the streams of the Northern Territory and Tasmania in the last few years, I can safely say that the water is warmer where the newsletter is now but the algae are more diverse where it is going.

### **1997 Annual General Meeting**

This is a reminder for those who get the newsletter before they leave for Adelaide. Please attend the Annual General Meeting on Wednesday, 1 October, and have your say on the future of our society. It is important we get a good cross-section of views on how ASBS should relate to the Society of Australian Systematic Biologists. There will be other issues equally important to the running of the society. The general meetings provide one of

the easiest opportunities for members to contribute to their society.

### **1998 Annual General Meeting**

An advance notice. Coincidentally, the 1998 Annual General Meeting will be held exactly one year later, on Thursday, 1 October, at Monocots II in Sydney. The Nancy Burbidge Memorial Lecture will be delivered during the conference. Financial assistance will be available for students who are financial members of ASBS and present a paper or poster at the conference. ASBS is one of the co-hosts of Monocots II, and all members are encouraged to attend.

### **Australian Foundation for Science**

The Australian Academy of Science has established this Foundation to 'involve the wider community in the advancement of science and technology in Australia'. With the potential demise of the annual ANZAAS conference, initiatives like this are important in promoting science in the wider community. One of the key projects funded by the Foundation is Nova: Science in the news, a web-site for teachers, students, journalists and others. The site will supplement school textbooks which by their nature are unable to include topics making news-of-the-day (*e.g.* life on Mars, ozone depletion, rabbit calicivirus).

I will be recommending ASBS provide a small donation to the Foundation to support the Nova project. Of the 29 topics currently provided by or being prepared for Nova, the most relevant to ASBS is probably 'Australia's threatened species'. However our studies apply to the

'Greenhouse effect', 'Toxic algal blooms', 'Environmental effects of population growth in Australia' and so on. Of course we will be a small player: there is unlikely to be a topic 'Botanical systematics shapes our future'. Still,

coupled with a revitalised FASTS and the eager Australian Science Communicators, it is getting hard to remain insular. And that is a good thing.

**Tim Entwisle**

## ASBS INC BUSINESS

### DEADLINE FOR DECEMBER NEWSLETTER

We would like to deliver the December issue of the newsletter before Christmas, not some time in January. We therefore ask contributors to meet a deadline of Friday 14 November.

**Eds**

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### NEWSLETTERS AND SUBSCRIPTIONS

If you have a careful look at the mailing label that came with this issue of the newsletter you will notice a date in the lower right hand corner below your address. This is the year our records show that your subscription has been paid to. If you have not paid your subscription for 1997 there will also be a coloured dot on the mailing label.

In recent years, newsletters have not been sent to members who remained unfinancial by the time the September issue was distributed. Council has reversed this policy for this year's September issue. Over the past few months, councillors, with the help of local chapter conveners, have been attempting to encourage members who have been unfinancial for a number of years to consider rejoining the Society. It is pleasing to report that this

membership drive has been very successful. In many cases, the members contacted reported that they had not intended to let their subscription lapse. They had simply forgotten to pay one year then lost contact with the Society when the newsletters stopped arriving. Council values your membership and hopes that printing the date on the mailing label might assist you in keeping track of whether you remain financial or not.

My apologies to those members who paid back dues and are waiting for copies of the newsletter. They will arrive in due course. The membership drive has been so successful that stocks of most recent issues are exhausted. Arrangements are being made to have copies printed from the digital files but this may take a little while and unfortunately these will be sent to you unbound.

**John Clarkson**

*Treasurer*

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### ADELAIDE CONFERENCE '97 UPDATE

Registrations for the joint Australian Systematic Botany Society and Society of Australian Systematic Biologists conference in Adelaide in September are approaching 200 and the programme has now been more or less finalised.

We hope to be able to place it on the ASBS Web page shortly so that by the time you are reading this it should be there.

Seventy oral papers and 34 posters have been scheduled for the more traditional Tuesday to Friday conference symposia and each symposium will have a mixture of plant, animal and protist systematics. The poster session will be held on Thursday and has been sponsored by Petaluma wines.

The Australasian Mycological Society will hold its meeting on the Wednesday. Key speaker for this symposium is Dr David Moore, President of the British Mycological society. His topic is 'Dynamic functional morphology in mushrooms – how mushrooms make mushrooms'. Cheryl Grgurinovic's recently released book, *Larger fungi of South Australia*, will be officially launched on the same day.

The main sections of the Software in Systematics symposium will take place on Sunday afternoon, all day Monday and on Tuesday evening. The concept of virtual Australian or global herbaria and museums will no doubt be discussed. A highlight will be the demonstration by 'biological imager', Anne

Hastings of the Australian National Insect Collection, of the high technology version of biological illustration. Kevin Jeans of CSIRO Publishing will talk on multimedia publishing. KE Software is a major sponsor of this symposium.

Time has been allowed on the Tuesday afternoon for a forum, to be hosted by the presidents of all three participating societies, on the future directions of systematics in Australia. A representative of the ABRS Advisory Committee will present some background information on past and current directions and resources for systematics after which it is hoped to throw the meeting over to a general discussion. Funding to ABRS has been cut considerably over the last few years and strategies need to be developed to try and turn this around. Since this will be a gathering of systematists from all parts of biology it seems appropriate to try and speak with one voice in urging a review of present policies. The aim of the forum is to seek commonality, not division, in the future direction and resourcing of Australian systematics.

**Bill & Robyn Barker and Laurie Haegi**

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## LETTERS TO THE EDITOR

Further to my comment in the last *Newsletter* (91: 27, 28) on the proposed new society, one has only to glance down the matters listed on its home page and ask: *What does it propose to do that ASBS is not already doing?*

Do we *REALLY* have the resources to spread ourselves that thinly??

**Alex George**

'Four Gables',

18 Barclay Road,

Kardinya, Western Australia 6163

## CONFERENCE REPORT

### **'BOTANIC GARDENS, HORTICULTURE & EDUCATION: PARTNERSHIPS IN THE DIGITAL ERA'**

**Trevor J. Christensen (AD) & Barry J. Conn**  
(NSW)

#### **Introduction**

The *Botanic Gardens, Horticulture & Education: Partnerships in the Digital Era* Conference was held at the *Milliken Research Centre*, Spartanburg, South Carolina, U.S.A. (April 3–5, 1997). The conference was jointly organised by Fairchild Tropical Garden, Miami and the Webel Foundation. Funding and facilities were provided by the Webel Foundation and the Milliken Co. Approximately 50 invitees attended, representing Botanic Gardens from the USA and elsewhere, the nursery industry, landscape industry, nature conservation agencies, educational institutions, publishers and

commercial information technology based companies, as well as a large number of observers. International invitees were from Australia (2), Singapore, Great Britain, South Africa and Russia.

#### **Aim of Conference**

The aim of the conference was to investigate how Botanic Gardens and the horticultural industry communicate information at all levels, from basic database listings to detailed plant selection and cultural details, and how current information technology *e.g.* CD ROM, World Wide Web can be utilised to allow national and international connectivity to this information.

#### **Themes of Conference**

Conference sessions focused on the following themes:

*Emerging technologies* – an overview from several professional perspectives of converging



technologies and their implications for multi-media communications and teaching. The emphasis during this session was on the evolution of information technology, its future directions and its role in reaching wider audiences than merely those passing through the gates of botanical institutions.

**Technologies in practice** – reports from several institutions as to their current and future strategies. A summary was provided from the perspective of the *American Association of Botanic Gardens and Arboreta* (AABGA) as to the challenges presented that were to be addressed at later AABGA conferences. During this session, one of us (TJC) presented a paper entitled 'Botanic Gardens and the Potential of Digital Technology' (included below).

**Database and sharing support** – provided an exploration of several major Botanic Garden databases as well as CD ROM and interactive text materials. Their possible uses for furthering horticultural and educational missions were also discussed. Presentations were made on the development and application of the BG-Base database system and a CD ROM package on Woody Landscape Plants developed by *PlantAmerica Inc.* The latter is being used as a teaching resource in University horticulture courses. The opportunity for the use of artificial intelligence with relational databases was also discussed. Abstracts from the 'How Botanical Gardens meet their Mission Objectives by Sharing Information' workshop are included below.

**Opportunities for partnerships** – a discussion of the botanical and horticultural partnerships to be explored and the development of conference outcomes.

As the conference progressed, it became clear that although many relevant initiatives were underway internationally, e.g. the *International Transfer Format for Botanic Gardens Plant Records* (particularly, ITF version 2), and the *Herbarium Information Standards and Protocols for Interchange of Data* (particularly, HISPID version 3), the USA botanical community had not accepted or utilised such standards and that little communication at this level occurred between their organisations. The AABGA, as the representative body for American gardens, was given the role of coordinating action to address the existing communication problems and to implement the conference recommendations which are as follows:

- to implement a strategy whereby plant records databases can be searched across institutions by utilising the internet
- expand the AABGA home page to include a directory listing leading people to information within Botanic Gardens and other related fields
- make information modules that have already been developed by AABGA members available on the internet

Continued funding was offered by the Mr Roger Milliken (CEO of *Milliken & Company*) under the condition that a report and first steps were developed for discussion and ratification at the AABGA conference in New York during May 1997. An initial grant from Milliken US\$50,000 was made and allocated as follows:

- Grant of \$10,000 to cover the costs of consulting time of Dr Eric Marler, IBM, who will advise the AABGA on models of how such a communications system could work.
- Grant of \$25,000 to AABGA to be dispersed

as \$2,500 grants to each of the 10 major U.S. gardens to explore and document database sharing opportunities.

- Grant of \$5,000 to Longwood Gardens to cover the costs of Mr R Darke, Curator of Plants, in exploring modifications of his MS Access database system and its interactive links.
- Grant of \$10,000 to AABGA to cover costs of co-ordination and presentation of findings.

The standard of data collection, presentation and dissemination in Australian Botanic Gardens and Herbaria was held in good regard by AABGA representatives at the conference and a desire was expressed to model some of their activities on Australian achievements. It becomes important for Australian institutions to continue to actively develop the data sharing links already in place and the utilisation of current technologies, such as interactive Web services, to enhance communications between each organisation, with the aim of extending such activities to related public and private bodies.

The Milliken Research Centre, Milliken and Company Corporate headquarters also provided an opportunity to examine the horticultural and landscape developments of the site.

Approximately 250 acres of land have been landscaped and planted by *Innocenti and Webel Landscape Architects* and Professor Michael Dirr, University of Georgia. The standard of horticulture is very high and would rival the living collections of many Botanic Gardens. Approximately 5,000 trees are planted on the site with many intensely planted Botanic Garden like areas of shrubs, perennials etc. A large proportion of the plantings are of selected high quality cultivars or hybrids that are readily available in the American nursery industry.

Several new cultivars have been developed at the site and trialed before release to the nursery industry, including a number of *Cornus* of hybrid origin. The entire area is open for public use and is an excellent example of private industry providing a community asset of high standard.

## WORKSHOP ABSTRACTS

### **'How Botanical Gardens meet their Mission Objectives by Sharing Information'**

Spartanburg, South Carolina, U.S.A.,  
5 April, 1997.

### **Ledger Book to the Digital Era (The Living Collections Plant Records Database, Royal Botanic Gardens, Kew)**

**Stewart Henchie**

Royal Botanic Gardens, Kew  
Richmond, Surrey, TW9 3AB, UK.  
email: s.henchie@rbgkew.org.uk

The Plant Record system at the Royal Botanic Gardens, Kew has progressed from a manual system involving a registration ledger book to a simple index card system. As part of the computerisation of the living collection records, the information on these cards were used as input to a main frame computer. Today, gardening staff input the information on our working database which is used as management and curation tool.

Over the two-hundred year history of the Royal Botanic Gardens, Kew, valuable knowledge about the plants in cultivation has been lost to the Gardens with the retirement of generations of horticulturists and botanists, because detailed records were not kept e.g. flowering



times, habit, and rate of growth. If you look back at our earliest records of plants received on the site of the present day Kew, the first reliable record in an Entry Book, *i.e.* a ledger, is on the 8 June 1793. This record mentions plants but not what they were! Of course, at this time, Kew was not an official Botanic Garden and recording of new accessions was not carried out in a methodical and reliable way.

During 1968, it was decided to establish a permanent computerised record system. For each plant, all known facts about its history, cultivation, and location in the Gardens were transferred onto a standard record card, which was then used to refer to that particular plant throughout its life at Kew. In 1983, the computerisation of these records began. Finally, in 1996, a Client/Server running on Windows using *Microsoft Visual Basic* and *Universe Objects* was developed. The main tasks done by this new system will be based around the everyday work carried out by most horticultural staff. The current database for LCD is primarily used for the *management and curation of the collections*.

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### Databases, Information Transfer and the Botanic Gardens of Adelaide

**T. J. Christensen**

*Horticultural Botanist*

*Botanic Gardens of Adelaide*

*and State Herbarium*

*North Terrace, Adelaide South Australia 5000*

*email: tchristensen@denr.sa.gov.au*

Over the last 10 years, information technology has become increasingly important in the day to day functions of the Botanic Gardens of Adelaide and State Herbarium of South

Australia. This has been recognized by the introduction of information technology to most, if not all of its programs. We have moved from manual systems that were relatively efficient, but in a limited way, to electronic systems providing access to all levels of data. The degree of development of Information Technology in each of the programs is variable mainly according to the adequacy of the resource base - both financial and staff. The impact of IT on the core business objectives of the Botanic Gardens and State Herbarium are discussed.

Since Botanic Gardens are leaders or focal points for many areas of the horticultural and botanical community, they are in a position to share large amounts of information. The major areas where information sharing is essential can be grouped as follows:

- other Botanic Gardens and herbaria
- Education - from primary to tertiary and adult education
- Horticultural Trade - nurseries, seed growers/suppliers
- Horticultural Societies
- Specialist government and non-government organizations:  
Conservation bodies, ANPC  
Cultivar registration authorities, ACRA

The future IT directions revolve around the necessity to continually improve the accessibility and data capture in the Information Systems by:

- upgrading the user interface and utilizing HTML tools
- providing a capability for field updating of data, possibly using hand held computer technology

- developing suitable barcoding systems at all levels of data capture from nursery techniques and stock control to the current status within the collections
- developing a GIS capability for planning, monitoring and mapping purposes
- integrating the above points to assist in enhancing data interchange with other organisations

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### **BG-BASE Collections Management Software - History and Future**

**Michael O'Neal**

*BG-BASE, Inc.*

*c/o The Holden Arboretum*

*9500 Sperry Road*

*Kirtland, OH 44094, USA*

*email: moneal@pop.holdenarb.org*

BG-BASE is a software application written primarily to handle the curatorial needs of a variety of institutions holding living and/or preserved collections, such as botanic gardens, arboreta, zoos, university campuses, etc. Representing 12 years of development, the system has now been installed in more than 80 institutions in 14 countries. This session will provide a brief history and overview of BG-BASE as well as discuss the future directions of the software.

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### **Rapid Prototyping CD-ROM Titles For Horticulture**

**Allan Armitage, Michael Dirr & Donald Potter**

Rapid prototyping is a computer software development strategy where the developer and the client work closely during an iterative

process of code generation, testing, and enhancement. The advantages of this approach focus mainly on the close involvement of the client throughout the development stage of the project, and the adaptability of the development efforts to changing programming specifications. A disadvantage arises when the client does not have a clear picture or mental model of the system's basic required functions.

We chose a rapid prototyping approach for the development of four projects supported by PlantAmerica in the Distinguished Authors Series. These four projects are: Michael A. Dirr's Photo-Library of Woody Landscape Plants on CD-ROM, Allan Armitage's Photo-Library of Herbaceous Perennial Plants on CD-ROM, Michael A. Dirr's Interactive Manual of Woody Landscape Plants, and Allan Armitage's Interactive Manual of Herbaceous Perennial Plants. Michael A. Dirr's Photo-Library of Woody Landscape Plants on CD-ROM is currently available from PlantAmerica.

This presentation demonstrates the photo-library software, discuss its development, and demonstrate the development of the interactive manual.

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### **Sharing of Accession-based botanical information**

#### **Reduction of Costs in Herbarium Data - entry in Australia using HISPID3**

**Barry Conn**

*Royal Botanic Gardens,*

*Mrs Macquaries Road,*

*Sydney NSW 2000, Australia*

*email: barry@rbgsyd.gov.au*

Botanic Gardens, together with their frequently

associated herbaria, maintain large amount of botanical information. Increasingly, this information is held in a computerised format. However, these data are rarely shared between similar botanical organisation, but rather, are often inadequately duplicated throughout the botanical community. This presentation discusses the costs of not sharing this information, both to the institutions involved and to the general community.

The agreement by the *Council Heads of Australian Herbaria* (CHAH), at their general meeting in Darwin (1996), to freely interchange electronic herbarium label data between all major Australian herbaria, represents a significant transnational commitment to the sharing of botanical data. The curatorial policy of all major Australian herbaria accept and expect electronic data to be provided to other Australian institutions, as part of the specimen exchange program. This study reviews the first five months of the application of HISPID3 (*Herbarium Information Standards and Protocols for Interchange of Data*, Version 3, 1996)<sup>1</sup>, the standard format used for the interchange of electronic herbarium label data.

There are several challenges remaining before continuous improvement of quality in the current herbarium specimen exchange program will be realised.

On average, 3,500 specimens are exchanged between each Australian herbarium per annum. Therefore, the electronic sharing of herbarium label data represents a saving (benefit) of approximately \$15,000 per institution, when compared with current practices.

A national reduction in the 'Overall Cost of Herbarium Label Data Capture' can be achieved by:

- an increase in the amount of Herbarium Label information shared electronically, as part of the herbarium exchange program;
- a reduction, by about a third, of the comparative costs of each collection by collecting an average of 3 replicates (4 samples in total).

<sup>1</sup> Internet URL - <http://www.rbgsyd.gov.au/HISCOM>.

## ABRS REPORT



Australian  
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Study

### STAFF

Mr Ian Cresswell has remained as Acting Director, Flora since the last Report. Interviews for the filling of the position on a permanent basis were conducted on Friday 15th August and an announcement of the successful candidate is expected in September. Katy Mallett returned to work in July after one years maternity leave, so once again the Section has a full staff complement in place.

### EDITING IN PROGRESS

The following volumes are almost ready to go to press, each being delayed by non-receipt of one or two contributions:

*Flora of Australia Volume 1 Introduction (2nd edn)*

*Flora of Australia Volume 17 Proteaceae 2*

*Flora of Australia Volume 48 Ferns,*

*Gymnosperms and their Allies*

The following volumes are well-advanced in

the editing process, and should appear during 1997/1998 (roughly in the order listed):

*Flora of Australia Volume 12 Mimosaceae (excl. Acacia), Caesalpiniaceae*

*Flora of Australia Volume 39 Alismatales to Arales*

*Flora of Australia Volume 43 Poaceae 1*

*Flora of Australia Volume 44 Poaceae 2*

*Flora of Australia Volume 51 Mosses 1*

In addition editing of the following volumes has started and they should also be published during 1998 or early 1999:

*Nature's Investigator: The Diary of Robert Brown in Australia 1801-1805*

*Flora of Australia Volumes 11A & 11B, Acacia 1 & 2*

*Fungi of Australia Volume 2B Catalogue and Bibliography of Australian Macrofungi 2*

### ABRS AND THE SPECIES PLANTARUM

ABRS Flora Section has recently become involved in another major project, production of *Species Plantarum: A Flora of the World*. As this has excited comment in a number of quarters, I thought it might be useful to set out the background to this project, so that discussion can be on the basis of fact rather than speculation.

#### Background

Initial discussions took place in 1990-91 between a number of institutions with a view to producing a Flora of the World. At a meeting of interested parties in Kew in November 1991, the

idea of a formal Flora-writing project was put to one side, while the idea of producing a Global Plant Checklist was pursued. This checklist/database project became the International Organization for Plant Information (IOPI).

In August 1993 the concept of writing and publishing a formal World Flora was revived, and a letter to interested parties was circulated by Dr R. Brummitt, with the support of Prof. Ghilleen Prance (Kew). Dr Brummitt prepared trial treatments of five small families to show what might be achieved. A Steering Committee for Species Plantarum Project (SPP) was established, and an informal public meeting was convened during the International Botanical Congress in Tokyo in September 1993. At that meeting strong international support was received from the botanical community, and the organisation of SPP was formalised.

Over the next two years considerable progress was made on developing the concept and content of the proposed Flora. This was carried out by correspondence between members of the Steering Committee, under the secretarial direction of Dr Brummitt. The first formal meeting of the Steering Committee of SPP was in Madrid in September 1995, where fine details of the Flora project were hammered out, and a number of working groups were established to deal with key tasks:

Guide for Contributors,  
Glossary,  
Editorial Standards,  
Priorities and Contributors  
Information Systems Committee-SPP subgroup

It was agreed that the default style of the World Flora would be that of *Flora of Australia*, but departures in some details were endorsed.

Subsequently, SPP was included under the umbrella of IOPI, as a separate initiative to the Checklist, but closely linked to it.

Since the Madrid meeting two drafts of a *Guide for Contributors* have been produced by the Guide working group (Convener: Tony Orchard), and in the process a number of minor additional points were identified which required more discussion. A consortium was convened to begin writing a major contribution to the Flora (Juncaceae). A second meeting of the SPP Steering Committee was held in San Francisco, 6–8 June 1997, at which the *Guide for Contributors* was adopted with minor modifications, and the final form of the *Species Plantarum* settled.

#### **The paper-based version of SP**

At the San Francisco meeting it was unanimously resolved that ABRs be asked to coordinate publication of the first parts of *Species Plantarum*, and I agreed to be initial editor. Two draft family treatments, Irvingiaceae and Morinaceae, have been written, and will be published as the first parts of the series, as models for other authors to follow. Publication will be by fascicles, each covering a family, subfamily or other major group, as text becomes available. Contributions will be produced on a voluntary basis, and no funding is available at present to support compilation of the treatments. The first two parts are expected to be in print by early 1998, and will be widely distributed to institutions world-wide.

#### **The electronic version**

It has been agreed that a parallel electronic version of the *Species Plantarum* will also be produced. At San Francisco it was agreed that the databasing of the descriptive material would present major difficulties (given current

resources), at least initially. However, information on names, bibliography, typification and distribution will be passed to the coordinators of the IOPI Checklist, and made available via their Website. As part of the preparation of the two sample treatments (above) ABRS will produce a trial version of Species Plantarum on CD-ROM to test possible formats. This will be a testbed version only, and available to those wishing to provide comment and input to the development of future volumes.

### Funding

ABRS has received external funding from the Biodiversity Program of Environment Australia to prepare these two sample family treatments. This money will cover the costs of backfilling for the editorial work needed, pay for publication and distribution of the sample treatments, and cover costs of development of the trial CD-ROM. The financial and resource effect on ABRS will therefore be neutral, and no delays in core ABRS projects will be incurred. In the longer term, a secure international financial base for the project will need to be found. Action is underway to identify such a base. The most promising model at present is one which envisages combining an international capacity-building role for taxonomy with the task of compiling and publishing the Flora. Under this model ABRS could undertake a training role in taxonomic editing and publishing as part of the project, with other institutions around the world undertaking a training role in the research and writing tasks. This aspect of the project is still in a very fluid state, and will take some time to finalise.

### Work in progress

As mentioned above, two families, Irvingiaceae

and Morinaceae, are already written, and will be published in early 1998 as samples/examples for future parts. A final version of the *Guide for Contributors* should be available by the end of 1997, and will be available in hardcopy and on the IOPI/SPP Website. The Glossary from *Flora of Australia Volume 1* (2nd edn), which has been compiled by Alison McCusker, will be adopted as the Glossary for *Species Plantarum*, and should shortly be available on the ABRS Website, and probably on the IOPI/SPP Website. A number of additional small to medium-sized families which could be written up fairly easily were identified at the San Francisco meeting and approaches will be made to potential authors in the near future. As a result of discussions initiated particularly by Dick Brummitt, volunteers for a few have already been received. One major project, an account of Juncaceae, is being funded by the Czech Academy of Sciences, and an international consortium led by Jan Kirschner hopes to have it completed within 3 years.

### Summary

The Species Plantarum Project is a bold (some would say foolhardy) initiative which has considerable support around the world. It is the first attempt in about a century to try to bring together a detailed account of the species of world plants in a uniform style, to a high level of taxonomic accuracy. I believe the time is right for such a project. Never before have there been so many major regional Flora projects underway at one time (*Flora of Australia*, *Flora Europaea*, *Flora of North America*, *Flora Neotropica*, *Flora Malesiana*, *Flora of China*, to name just a few). These Floras all have their own legitimacy, and their own formats, client bases and environmental agendas to address. However, when one stands back and looks at regional Floras it is clear that there are



discontinuities in taxonomic concepts at their borders, and there are often (relatively) small gaps in coverage around their margins. So much of the work, in many groups, is already done, or is being done. On the other hand, the increasing use of electronic methods in both research and publishing means that the task of merging these sometimes disparate treatments is easier now than it has ever been. With some effort to fill the gaps and iron out the inconsistencies, uniform treatments of many groups are within reach. This is not to gloss over the task ahead of us: many groups are truly frightening in the amount of work needed. However, if we don't start then nothing will happen. International sentiment is, I believe, slowly swinging in favour of such initiatives. The Convention on Biological Diversity has spawned a number of initiatives

designed to make real progress on cataloguing, documenting, monitoring and conserving the world's biodiversity. Of these bodies, the proposed Global Taxonomic Initiative is particularly apposite to *Species Plantarum*, and its development is being closely followed. I believe that the world's plant taxonomists have the ability to make *Species Plantarum* happen. I hope they have the will to make it happen. And I am particularly pleased that ABRS has been chosen to take a leading role in the project, a fitting recognition of Australia's position at the forefront of the documentation of biodiversity to the highest possible standards.

**Tony Orchard**

*Executive Editor, ABRS Flora*

## ABLO REPORT



**Australian  
Botanical  
Liaison  
Officer**

Well, I have come to the end of my term as the 40th Australian Botanical Liaison Officer at Kew and am about to commence a new direction in my career. I am not sure where the year has gone, especially the last six months. It has been a wonderful experience, and I was particularly

pleased to have been able to renew some acquaintances that have spanned more than 25 years. I guess it is for others to judge how successfully I have carried out my duties as ABLO but I hope I have succeeded in answering most of the requests that have come my way.

The relatively dry winter and spring gave way to the wettest June for 100 years and we have had periods of rain ever since. I have found the humidity to be surprisingly high and have felt quite uncomfortable at times, even though the temperatures have rarely risen above 30° C. I will not say too much about the cricket, particularly after the dismal showing of the Australians in the last Test but at least the Ashes are safe for the time being.

### Honours

Professor William Stearn received a CBE in the Queens Birthday Honours list. Most botanists I know have a well worn copy of 'Botanical Latin' on their desks. Professor Stearn was quick to point out to me one day that he had written several hundred other articles as well.

### Kew International Herbarium Techniques Diploma Course

Thirteen people attended this two month course including Artis Vinas from Bulolo Forestry College in Papua New Guinea and Christine Beard from the University of Waikato in New Zealand. Artis and I go back a long way and it was good to see him again. The Diplomas were presented by the Director at a function held in the Kew Guild Room on Friday 25th of July. Amongst the guest was Miss Rosaleen McGovern from the Australian High Commission and I was able to take her on a quick tour of the herbarium and library (the Australian Agency for International Development sponsored Artis Vinas on the course).

### A unique threesome?

How often do we see the holotype specimen, the collector and the author together in the same room. This happened at the reception following the presentation of Herbarium Techniques Diplomas when Artis Vinas (the collector) posed with Mark Coode (the author) and the holotype of *Elaeocarpus bilongvinas*.

### Lost and found

I was pleased to get an e-mail a week or so ago from a botanist, who shall remain nameless, saying that some slides I had posted last October had finally arrived. I apologise to the postal service for all the dark thoughts I have been thinking about them.

### Electrical and other works

At the time of writing the rewiring and installation of smoke detectors and emergency lighting has almost been finished on the top levels of Wings C and B. Scaffolding had to be erected across the atriums in both wings to give workmen access to the high ceilings. I had hoped I might have escaped the disruption but it now looks like I'll get caught up in it during my last week.

The contractor who will undertake the extension to D Wing is on site and the first bits of scaffolding are in place. Please contact the Keeper if you intend to visit Kew in the next 12 months or so as you may well find parts of the building to be inaccessible. I understand also that part of the roof at the Natural History Museum is to be replaced.

### Visitors

At the time of writing 29 visitors had sought the assistance of the ABLO. Most only stayed a short time but two recent longer term visitors were Betsy Jackes looking at Vitaceae and Les Pedley working in the legumes.

### More retirements

Mark Coode retires from Kew at the beginning of September and Roger Polhill a few months later. No doubt both are looking forward to shedding their respective administrative loads.

### Paris

I eventually made it to the Museum national d'Histoire naturelle, Laboratoire de Phanerogamie and spent four days mainly looking at *Stenocarpus* material from New Caledonia and photographing types for various Australian botanists. Unfortunately I did not meet the Director, Professor Ph. Morat, who was in hospital at the time. The Australian

Proteaceae collection was found to be rich with specimens from the early collectors. I identified quite a few types in *Isopogon* and *Petrophile* which were not in type folders.

I would encourage any Australian botanist who has the chance to visit Paris to do so. It is after all not that far from Kew and you should experience the Eurostar at least once.

**First Biennial International Conference of the Systematics Association - St Anne's College, Oxford, 19-21 August 1997**

About 200 people attended this conference and it was nice to meet up with Ken Hill, the incoming ABLO and his family, and begin the 'meet and greet' circuit. There were sessions on molecular and alpha taxonomy, nearly all featuring the compulsory cladogram. During the first day there were three papers on diatoms but generally the lower plants and animals were under represented. An underlying theme of some papers was to make Systematics more user friendly but I for one found some of the papers hard going. A reception was held in the Oxford Museum next to a rather odd looking koala and skeletons of various beasts. The plants were not forgotten and featured as detailed iron

mouldings near the tops of the central columns. Some of the talks suffered from a lack of sound equipment but mostly the speakers overcame these difficulties. There were several sessions on communicating systematic information which I found quite interesting. Unfortunately I understand not all the papers will be published in the Proceedings. One rather entertaining speaker left us with the thought 'Everything you know is wrong!'

**Thanks**

I take this opportunity to thank all those people who have sent letters of appreciation for the work I have undertaken for them. It is always nice to know your efforts do not go unnoticed. My thanks also the staff of the Royal Botanic Gardens Kew, the Natural History Museum, the Linnean Society and the John Lindley Herbarium at Cambridge University for their help over the last 12 months. It has been very much appreciated. Thanks also to ABRs for their financial support which made this year possible.

**Don Foreman**

*[Received 26 August]*

## NEWS FROM FASTS

### JUNE CIRCULAR

#### 1. The Stocker Review

Minister McGauran has not yet set a time frame for responding to John Stocker's Review of the way S&T is organised in Australia, but certainly 'Priority Matters' has given him (and Cabinet) plenty of food for thought. Stocker picked up a number of FASTS' issues, such as the lack of

vision within Australia for science and technology, and the need to offer industry greater incentives to undertake R&D. I gave the Review and its 30 recommendations eight out of ten, given the time-frame and the constraints of its terms of reference.

The Review also provided a welcome re-affirmation of the CRC Program, at a time when

Government seems to be walking away from election commitments to maintain funding.

There are sensible recommendations (the substance of which may need some refinement) on how scientific advice should feed into the Government decision-making process, and on restructuring PMSEC and ASTEC. This would clear up a lot of the confusion which has clouded these two bodies, and how an inter-Departmental coordinating committee (the CCST) should link with them.

Stocker recommends a chief science adviser should be appointed in all Portfolios with significant S&T responsibilities, and this too seems a sensible coordinating device. Currently only the Department of the Environment has such a position.

How will the Government react? FASTS has urged it to adopt some of the low-cost, non-controversial ideas immediately. These would include new arrangements for a streamlined PMSEC and ASTEC, and the CCST coordination. We would like other measures adopted too, but some of these cost money and Government has shown little enthusiasm for others. For instance, Stocker joins the chorus of criticism levelled at Government by industry and science groups about its lack of vision. FASTS would welcome any steps towards articulating a preferred vision for what Australia will develop to in the 21st century. Then S&T can analyse how to support that vision.

The Review urges the Government to review its overall assistance to industry for innovation, and this must involve decisions made in accord with an agreed vision of Australia's sustainable development.

FASTS will formulate a formal response in the next month, and we would welcome comment on the Review from all Presidents by July 21. The Stocker Review is available on the web at [dist.gov.au/science/cs/index.html](http://dist.gov.au/science/cs/index.html) or in hard copy by phoning DIST on (06) 213 6483

## **2. FASTS' Board meeting in June**

The Board raised a number of concerns, all in the context of a sharp downward trend in the Government forward budget estimates for S&T (for instance, in health research current spending of \$174 million is projected to be cut to \$131 million in 2000-2001).

But as Minister McGauran has said, forward estimates are just that - estimates. They can be changed upwards or downwards depending on circumstances. The onus is on the S&T community to demonstrate repeatedly its value to Government.

Specific Board issues included a DEETYA report indicating a 3.5% decrease in undergraduate science enrollments. This decrease has been compounded because a number of universities lowered their TER entry scores.

Concern was also expressed over the lack of action on school issues, with the suggestion that the emphasis was on testing rather than maintaining standards. And the Board decided that FASTS needed to build better links with industry.

I would be interested to hear from Members with strong industry links, and to know how you developed them.

## **3. New Vice-President**

Dr Geoff Hudson, President of the Australian

Geoscience Council, has been elected Vice-President. He takes over from Richard Arculus, whose commitments overseas have made it difficult to contribute the way he would have liked. Geoff's appointment is until the AGM in November.

#### **4. Popular science**

A recent AGB McNair survey showed that twice as many Australians want to read about science rather than sport or politics, and that science beats crime and unemployment as a popular media topic. In the FASTS media release on the survey, I said: 'The batting performance of Mark Taylor and the political agenda of Pauline Hanson have come under the most intense media scrutiny. But where is the equivalent scrutiny of S&T?' I have written to the editors of Australia's top media outlets urging them to give greater coverage to science, and have already made an appointment to discuss the matter with one editor. I will also be writing to Presidents of all Member Societies on this, urging them to be proactive.

#### **5. Launch of Careers Forum proceedings**

Minister for Science and Technology Peter McGauran has agreed to launch the Proceedings from the Forum on Science Careers (which FASTS and the NTEU organised jointly). There will in fact be two launches, one in Canberra at 10.30 on Tuesday 22 July; and the other in Melbourne at 10.30 Thursday 31 July. Young research scientists are invited to attend, and it will be an excellent opportunity to discuss the issue with the Minister. He did not have time to answer questions at the Forum, because he had to get back to Parliament (it was a sitting day). Contact Julie Wells at NTEU for invitations, on [jwells@nteu.org.au](mailto:jwells@nteu.org.au)

#### **6. Meeting with Democrat Senator Stott Despoja**

FASTS' secretary Chris Easton, Toss Gascoigne

and I met Senator Natasha Stott Despoja, Democrat spokesperson on S&T matters, and her science adviser Dr Charles Lawson. We had a good discussion on a number of matters: the taxation of post-graduate scholarships, the West Review of Higher Education, women in science, and differential HECS fees.

This maintains FASTS non-partisan approach to political groups. We have established useful links with the three major groups in Parliament - Government, the Labor Opposition, and the Democrats - and can discuss S&T policy with all of them.

#### **7. Council on November 20**

Peter McGauran, Martyn Evans and Natasha Stott Despoja have all accepted invitations to address FASTS Council in November. The dinner that night will be at the National Press Club, and will be addressed by a leading figure from S&T. All Member Societies are invited to send representatives, and to contribute to the makeup of FASTS 'Top Ten Policies' for 1998. Formal information about the meeting will be sent out to Member Societies shortly. Please canvass your members for the appropriate 'Top Policies' from your Society's perspective.

#### **8. How FASTS can help**

FASTS works constantly with Ministers and the Opposition parties, and the science media. Member Societies might like to make use of this expertise. Executive Director Toss Gascoigne can help Members make contacts in Canberra, and has worked with Member Societies on media releases, policy launches and correspondence with Ministers. His contact details are given below.

#### **9. New web site address**

Graham Johnston, former president of FASTS,

ASCEPT and the RACI, does an excellent job in keeping the FASTS' site right up to date. It has all the basic information about FASTS, and provides links to our Member Societies.

Now we have a new address for the FASTS web site:

<http://www.usyd.edu.au/su/fast>s

### **10. Media**

I have noticed articles in several Society newsletters which, if presented in simple terms, would be of interest to the general media. One example is a statistical survey of the way people choose Tattsлото numbers, which appeared in the Statistical Society newsletter.

We need to get greater coverage of S&T in the media, and we know people are interested in reading about it. Member Societies might consider putting out a media release highlighting an interesting article in their newsletters and journals. Toss Gascoigne can help with this.

FASTS' releases:

'Science tops in poll vote' and 'FASTS 'thumbs up' to Stocker Review'. Headlines on FASTS' stories included 'Funding under the microscope', 'Warning on math's funding', 'Science gets more runs on the board than sport', 'Women seek out science over sport', 'Brains thump brawn in popularity stake', 'Science not part of government's strategy, FASTS claims', 'Budget puts R&D on hold', 'Chief scientist attacks cuts in R&D incentive', 'Science boss urges action on research', 'Report urges tax rethink on R&D', 'Editors ignore the public's wishes'

**Joe Baker**

7 July 1997

## **JULY CIRCULAR**

### **1. Mortimer Review**

The future of the Cooperative Research Centres is looking less rosy. The financial screws have been turned a little tighter, with a three per cent efficiency dividend being applied from 1997-98, and a reduction of funding foreshadowed in the Budget's Forward Estimates.

Now the Mortimer Review has emerged. The CRC Program, which has been internationally admired as a model for bringing research and industry together, comes in for harsh judgement. Mortimer recommends a cut in the overall budget for the CRC program from \$146 million in the 1997-98 budget, to a maximum of \$20 million. This funding would be restricted to the 'public Good' CRCs, with all other CRCs being regarded as delivering a 'private benefit'. His Review has been greeted by general applause of the business community, and FASTS joins them in supporting recommendations which set the right climate for growth. Clear systems to encourage a whole-of-Government program to support industrial development and investment are admirable objectives. But his recommendations on basic research and ecologically sustainable development are not backed by argument or analysis to justify the recommendations. He goes on to set unjustified target earnings from external sources for researchers like CSIRO (50 per cent), and the Australian Institute of Marine Science (AIMS) and the Australian Nuclear Science and Technology Organisation (ANSTO) (both 37 per cent), and the universities (50 per cent increase by 2005). The net effect would be to diminish the fundamental and strategic research efforts of our national research institutions, in the quest to lift external earnings. In ten years the intellectual capital of bodies like CSIRO could



well be exhausted.

The recommendation to wind up the Rural Industries R&D Corporation (RIRDC) and the Land and Water Corporations (including LWRRDC), and those on the sustainable management of natural resources are similarly flawed. In the recommendations on R&D, the Review's thinking leaves no room for direct Government funding for capacity building. There is little long-term vision in such an approach, and FASTS cannot stand by and watch any wholesale dismantling of the public research effort.

The Mortimer Review is available on the web at [www.dist.gov.au/events/Mortimer/index.html](http://www.dist.gov.au/events/Mortimer/index.html) (or through the 'Going for Growth' button on the DIST home page) or in hard copy from Government book shops.

I have specifically sought involvement of Presidents of Member Societies in preparing a response to the Mortimer Review.

## **2. The Stocker Report**

FASTS is urging the Government to adopt some of the less contentious aspects of the Stocker Review immediately. A considered response to the Review is in the final stages of preparation, and a meeting has been arranged with Minister Peter McGauran on 26 August.

## **3. New member**

I am delighted to announce that FASTS has a second Affiliate Member, the Scientific Suppliers Association of Australia. The SSAA represents companies supplying research and industry with instruments and materials, and its 100 plus members have a gross turnover approaching \$1 billion annually. FASTS welcomes the opportunity to strengthen our

connections with industry. This will increase our capacity to advise Government on S&T issues across the board.

## **4. State S&T Policies**

State Governments are becoming more aware of the role S&T can play in wealth creation and solving environmental problems. Victoria has joined WA in announcing an S&T policy, and other States are showing similar interest.

The States are showing the Commonwealth Government the way. Despite criticism from industry, business and S&T groups, the Commonwealth has been resistant to the idea of establishing a national vision, and setting out a clear role for S&T in helping realise this vision. Perhaps the combined weight of advice from the community and commissioned reports from Mortimer, Stocker, and the impending Goldworthy Review of IT will persuade the Commonwealth Government to act more decisively in this area.

## **5. Science Careers Proceedings**

The Proceedings of the Forum on Science Careers have now been launched by Minister Peter McGauran in Canberra and Melbourne. President-elect Peter Cullen represented FASTS in Canberra, and Board Member Jan Thomas in Melbourne. The Minister addressed groups of young scientists in both centres, and said that he 'open to any suggestions' which might solve the problems young scientists find when they seek careers in research. For those with suggestions on careers, the Minister's fax number is 06-273 4150.

## **6. PMSEC Dec. 10**

The Prime Minister is likely to address the issue of marine science at the next meeting of his Science and Engineering Council, tentatively

scheduled for 10 December from 9 am to 2 pm. The Prime Minister has shown a strong commitment to PMSEC. While it provides a valuable occasion for Cabinet Ministers to meet with leading figures from S&T, the reforms suggested in the Stocker Report add value to a day which is important to the science community.

## 7. Assisting member societies

FASTS can help Members lift their public profile. Toss Gascoigne worked with the Australian Marine Sciences Association to help them launch 'Towards a National Marine Science Policy'. This involved helping arrange meetings with Ministers, preparation of a media release, organisation of media event, and liaison with the Australian Geosciences Council.

## 8. New Policy Document

FASTS Council on November 20 will concentrate on revising the Policy Document and drawing up the list of Ten Top Priority issues for 1998. These will be particularly important in terms of the political cycle, with a pre-election Budget due in mid-May 1998. Agenda papers for Council are about to be mailed out, and Members should consider their input into these policy matters.

## 9. Media

### Releases

'Promising signs on science careers'; 'Call to create 'super science' pool'; 'Mortimer review found wanting'.

### Coverage

*Lab News* July 97 p8 'Science 1, Sport 0 in new poll'; *Lab News* June 97 p 10 'What they'd like to come out of the West'; *Search* July p169 'Australians prefer science in media'; *Search* July p169 'Govt resolve on S&T challenged by

Stocker'; *Campus Review* July 16 p1 'Scientists go mad for Gemini'; *Courier Mail* July 14 p 6 'Science leaders call for marine strategy'; *Financial Review* August 1 p20 'Scientists dissect Mortimer's recommendations'.

**Joe Baker**

7 August 1997

## AUGUST CIRCULAR

### 1. Meeting with the Minister

Toss Gascoigne and I met with S&T Minister Peter McGauran last week, to discuss the FASTS' response to the recent Stocker Review and Mortimer Report.

The Minister said that the Mortimer Report will not be considered by Cabinet until mid to late October. He hopes to weave consideration of the Stocker Review in with the Government's response to Mortimer.

A large part of the conversation centred on the position of the CRCs. The Minister made the point that all the reports and inquiries commissioned by this Government into the CRC Program were an appropriate and normal examination of a program established by the previous administration. He said he was pleased that there was to be a further review of the CRCs (an examination of their commercial aspects). It will be by an inter-departmental committee (IDC) of DIST and the Department of Finance.

The IDC's terms of reference are the scope for increased commercialisation and self-funding within CRCs, and will be published very soon (when DIST and Finance agree on the details). Submissions will be by invitation, with a closing date of October 20.

The IDC review will effectively take the CRCs out of the Government's consideration of the Mortimer Report. Their future would instead be determined early in 1998, in the context of a pre-election Budget.

The Minister advised CRCs to go about their business quietly and to stop lobbying, and expressed quiet confidence in their future. I am not sure that I share Minister McGauran's optimism.

The CRCs are in an interesting position. If they are supported too stridently by their industry partners, the economic rationalists in Finance and Treasury will say: if industry finds this such a valuable program, then they won't mind funding it. And Government is naturally suspicious of any research organisation expressing confidence in one of its programs. That's a sign the program is being too generous.

One key message for the CRCs to get across to Government is that the research and commercial linkages would not have happened unless the CRC program had brought the partners together. The Program has to act as a bridge to link groups which have traditionally found it difficult to get together - industry, universities, and Government R&D agencies. Another very positive aspect is the involvement of community leaders in CRC boards.

The Stocker Review has also just been referred to an IDC, to report by the end of September, and the Minister expects to begin discussing implementation with his colleagues from early October.

It will be an interesting (and uneasy) period for CRC Directors, and one in which they may feel less than relaxed and comfortable. My strong

recommendation is that CRCs should aim to place 'good news stories' on CRC outcomes with all media outlets in the next three to four months.

## **2. The Stocker Review**

FASTS has formally advised the Minister of its broad support of the major recommendations, and has urged the Government to adopt some of the less contentious items immediately.

Our support covers:

- a closer interaction between PMSEC, ASTEC and the CCST
- access to a specific Cabinet Committee
- the concept of Deputy-Secretary level appointments of Chief Science Advisers in all the science and technology-dependent portfolios
- the greater recognition of involvement of States and Territories; and
- the strategic role of PMSEC in defining the roles and needs for science and technology in meeting national objectives.

## **3. The Mortimer Report**

In our formal response to this Report, FASTS is sharply critical of the recommendations relating to public research institutions such as CSIRO, AIMS, ANSTO, the Universities, the CRCs, and to sustainable natural resource management.

I believe that Mortimer's arguments were not supported by evidence, and that his assessment was shallow and ill-informed. I have since written to David Mortimer, asking him to explain the basis of his reasoning.

## **4. Meeting with John Stocker**

Toss Gascoigne and I met with John Stocker on Tuesday 19 August to discuss the progress of his Review, the Mortimer Report, and likely topics

for PMSEC in December. Stocker is leaning towards the view that PMSEC should concentrate on the job-creating capacity of S&T as a major topic in December 1997, with progress towards a Marine S&T Plan a second topic in December, or as a focus for a later meeting when the Plan is more advanced.

### **5. Proposed New Science Forum**

President-elect Peter Cullen and Toss Gascoigne have been participating informally in an advisory committee developing the idea of a new Science Forum, aiming to bring the best of Australian science to the public. FASTS has not yet debated any specific proposal on this specific topic.

Australian Science Communicators and ANZAAS are working as the prime movers in this exercise, and they expect to be inviting all major science bodies (including FASTS) to join the organising group.

In the meantime, ASC and ANZAAS have agreed to work together to organise the ANZAAS Congress in Hobart in Sept 1998, and a pilot Science Forum (as advocated by ASC) in Science Week 1998. The aim is to roll ANZAAS and the Forum into one event in 1999.

### **6. Fifty members**

With the Australian Society for Parasitology joining FASTS last month, we celebrate our 50th Member. This is a cause for celebration, but we need to extend our coverage as widely as possible to validate our claim that we represent the working scientists and technologists of Australia. I am writing to a range of Societies and other organisations to invite them to become Members.

The Prime Minister and other Ministers may

recently have shown an increasing awareness of S&T, but the Government has only a glimmer of an understanding of the potential value scientists and technologists to Australia. FASTS cannot relax in any false assumption or sense of security that the job is done. In fact we must be more active than ever in the lead-up to the 1998 pre-election Budget.

### **7. Council November 20**

Council this year will consider a revised Policy Document, and Members are invited to forward changes or additions they would like included in the draft to be discussed at Council. My aim is to get a near-final draft document to hand to incoming President Peter Cullen by the end of Council, for him to launch early in the new year. This is when the Government will be considering its pre-election Budget, an excellent time to remind them of the value of funding S&T institutions appropriately.

Member Society are entitled to send one representative (and observers) to Council, and are reminded to complete the acceptance form recently sent out by registered post.

### **8. Chemistry conference**

I was delighted to see that the RACI will host the 38th Scientific Congress and 41st General Assembly of the International Union of Pure and Applied Chemistry (IUPAC) in 2001.

Professor Peter Andrews, Chair of the IUPAC 2001 bid, said that the decision to hold these meetings in Australia demonstrates the tremendous esteem in which Australian chemistry is held internationally, and is a clear signal to Australian governments and Australian industry that we have all of the chemical strengths needed to develop the new high technology export-oriented industries on which

our future prosperity will depend.

**Joe Baker**

4 September 1997

Mr Toss Gascoigne

PO Box 218, Deakin West, ACT 2601

Phone: 02-6257 2891 (work); 02-6249  
7400 (home)

Fax: 02-6257 2897

Mobile: 0411-704 409

Email: [fasts@anu.edu.au](mailto:fasts@anu.edu.au)

Web address: <http://www.usyd.edu.au/su/fast/>

## OBITUARIES

### ERIC N.S. JACKSON

A long-time supporter of the Australian Systematic Botany Society died in July. Eric Jackson was a member of the society from its founding, but it was within the South Australian Chapter that his modest presence was most felt. Eric was a regular attendee at our monthly meetings. A bibliophile of long standing, Eric could always be relied on to have copies of the latest books on natural history to table or copies of old books for interest.

He was extremely generous with his books and made many contributions to the Adelaide Botanic Gardens library. He also supported their publication. With respect to ASBS he made up a last minute short fall in funds for the publication of Barker & Greenslade (1982) *Evolution of the Flora and Fauna of Arid Australia* and offered support for another of the ASBS publications.

Eric worked in the State Herbarium of South Australia as a Technical Officer from 1958 to 1986, and following his retirement was a member of the Tuesday brigade of volunteers. Eric's particular work on the Tuesday was to continue on with the updating of the Reference Herbarium and it is fitting that this facility now bears his name.

During his working life Eric was part of some of the longer field trips to Western Australia and

the Northern Territory and was a regular participant in the annual Nature Conservation Society of South Australia field camps. His 6000 collections therefore are predominantly from these three states.

One ASBS field trip in which he participated with his wife Agnes, was in 1980, when we hired a river boat in order to collect along the Murray River and plan a potential field trip for the Sydney Botanical Congress. Nothing came of the field trip but we all had a most enjoyable and productive few days.

Eric was an active member of many societies dealing with natural history and conservation – Field Naturalists, Bushwalker's, National Parks and Nature Conservation of South Australia to name a few. All of them benefited in some way from his generosity and 'behind the scenes' participation.

To quote the person who knew him best, his wife, Agnes. 'Eric's modest but devoted contribution to our knowledge of Australian wild life set an example for all workers seeking to preserve our natural environment as a place where future generations may live in balance with nature.'

A gentle man, his quiet presence at our SA Chapter meetings has already been missed.

**Robyn Barker**

**LAWRENCE ALEXANDER SIDNEY  
JOHNSON,  
26 JUNE 1925 – 1 AUGUST 1997**

The recent death of Dr Lawrie Johnson has left a major gap in Australian botanical science and at Sydney's Royal Botanic Gardens.

Johnson was associated with botanical systematics and the Gardens for fifty years: as botanist, 1948–1972; Director, 1972–1985 and, after retirement, Director Emeritus and Honorary Research Associate, 1986–1997. He received many honours, having been a Member of the Order of Australia and the Australian Academy of Science, awarded the Clarke and Mueller medals in recognition of his scientific achievements, and Honorary memberships of the Botanical Society of America, the American Society of Plant Taxonomists and the Linnean Society of London.

His colleagues had celebrated him in his 71st year with a festschrift issue of *Telopea* (Volume 6 part 4) that includes many international contributions and was published on 1 July 1996. In this are accounts and discussions of his career and botanical work by Briggs, Benson and Hull and a list of his publications up to 1995 (*Telopea* 6: 507–509). The University of Sydney has recently included him among the notable graduates featured on its home page on the World Wide Web.

As a systematist with strong interest in phylogeny, Johnson's work was both characteristically intensive and wide-ranging. Systematic treatments have been of Oleaceae, Zamiaceae and with Karen Wilson Casuarinaceae and Juncaceae, with myself Proteaceae, Myrtaceae and Restionaceae and with Peter Weston *Persoonia*. Most of all he is associated with studies of the eucalypts, for which he produced classifications covering the more than 800 species and studied many groups in detail. This work was joint with Lindsay Pryor

(later Professor of Botany at the Australian National University), Ken Hill and Don Blaxell. These eucalypt colleagues especially shared his enthusiasm for studying plants in the field.

His thirteen years as Director transformed the Royal Botanic Gardens Sydney into a much more vigorous and forward-looking organisation. There was planning and development of the Mount Tomah and Mount Annan Botanic Gardens, leading towards opening these to the public. Better facilities were obtained for the scientific and community programs; education programs began, as did the Friends of the Royal Botanic Gardens; the Tropical Centre glasshouses were planned. In addition, the scientific activities were broadened and international links strengthened, with more emphasis on ecology and the information needed for the preservation of biodiversity.

In environmental conservation Johnson advocated the conservation of critical areas, the reduction of processes of degradation such as land clearance and eutrophication, and he strongly encouraged ecological programs. His influence was especially important twenty to thirty years ago when well informed advocates for conservation were far fewer.

During his retirement Johnson became increasingly out of sympathy with trends in management and priorities at the Gardens, but continued active involvement in research on the groups with which he had been concerned. In his last years, with his own involvement declining, he relied more heavily on colleagues, especially Wilson, Hill and myself. As in earlier years, he always made a point of generously acknowledging his predecessors and colleagues, as well as appreciating the kindness and support given by younger staff members since his retirement.

Anyone sharing fieldwork with Lawrie, or even holiday travelling in Australia, became used to



his driving with one eye on the nearby trees and the frequent stops to check yet another aberrant eucalypt. He enjoyed no-luxury camping, wherever possible being reluctant to turn for home until sunset on the last day.

He had always been interested in major Southern Hemisphere families, being concerned with their biogeographic history as well as their phylogeny. Johnson therefore particularly welcomed opportunities to see for the first time parts of South Africa in 1996 and southern South America in early 1997, both with botanical colleagues.

Very soon after the South American visit he was diagnosed as having brain tumours that had spread from a melanoma removed the previous year. After radiotherapy he made an apparent improvement and returned briefly to botanical work. He was working on manuscripts of joint studies with Ken Hill on *Eucalyptus* to within a few hours of his last conscious time.

Johnson's 103 publications over 1949 to 1995 were previously listed in *Telopea* and subsequent publications and manuscripts submitted or close to submission will be itemised in the next issue of *Telopea*. Further joint work with several colleagues, including myself, will follow in future years. He would have particularly regretted that he did not see finalisation of the DNA studies in Restionaceae and allied families with Simon Gilmore, Adam Marchant and Carolyn Porter, since he was enthusiastic about the new insights coming from these methods.

Johnson held views passionately and was articulate and sometimes vehement in expressing them; always emphasising truth, scholarship, the importance of the natural environment, justice and freedom from superstition. Managerialism and the excesses of commercialism in modern life he condemned to the last. He appreciated the help of colleagues and was a friend, leader and

guide to many younger botanical associates. His wide ranging knowledge and scholarship were made freely available to the many who sought his help. Lawrie's lively wit and humour will also be remembered; no-one else we knew could turn out a limerick on any and every subject with the same facility and style.

The report of his death has brought accolades from around the world and many parts of Australia. He is survived by his wife Merle, who was always such a strong support to him, sons Chris, Nicholas, Quentin and Sandy, daughter Sylvia and grandchildren Melissa, young Quentin, Madison, Miles, Hugh, Claire, Angharad and Callum.

Lawrie has left a great legacy in the increased knowledge from his research, the renewed vitality of Sydney's Royal Botanic Gardens that he served so well, and in colleagues here and worldwide who gained from his high standards of scholarship and intellectual honesty, and his passion for nature, science, justice and truth. These endure, and his lively wit and his friendship will long be remembered.

**Barbara G. Briggs**

*Royal Botanic Gardens Sydney*

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## MISCELLANY

### **SPEECH GIVEN AT THE OPENING OF THE N.C.W. BEADLE HERBARIUM AT THE UNIVERSITY OF NEW ENGLAND, FRIDAY 20 JUNE 1997**

Chairman, ladies and gentlemen,

Thank you very much for inviting me to take part in this ceremony, which marks a very significant step in the growth of plant biodiversity studies at UNE.

On behalf of Environment Australia let me join in the expressions of sympathy to the University, and to his family and colleague, at the tragic death of Professor John Milburn, who obviously deserves much credit for what is happening here today.

The Australian Biological Resources Study (ABRS), which comes under my wing in Canberra, has the very challenging task of preparing a comprehensive inventory and a full set of descriptions of all Australia's plants and animals. We rely very heavily on the help and co-operation of all Australian herbaria and museums in this essential but very ambitious program. All the State and Territory herbaria have co-operated generously.

As one of the most significant Regional Herbaria in the country, this herbarium and this department can be very proud of their contributions. From among its staff and students, this department has contributed:

- four leading taxonomists in major Australian plant collections

- Gordon Guymer, currently Head of the Queensland Herbarium
- Gwen Harden, currently Senior Botanist of the National Herbarium of NSW
- John Green, formerly Director of the Western Australian Herbarium
- Ben Wallace, Director of Living Collections at ANBG, Canberra
- two authors or editors of major State and regional floras
  - Noel Beadle (*Flora of the Sydney Region, Flora of NE New South Wales*)
  - Gwen Harden (*Flora of New South Wales*)
- three Australian Botanical Liaison Officers at the Royal Botanic Gardens, Kew (a post which ABRS funds and which gives us critical access to historic material used in writing the Flora of Australia) – Gordon Guymer, Don Foreman, and this year's appointee, Ken Hill.
- and the foundation Head of the ABRS Flora Section – Alison McCusker.

For a small University that is quite an achievement. It demonstrates that a Botany department with a strong taxonomy teaching program based on a good herbarium can make a very significant contribution at the national level - using its resources to generate professional expertise and scientific leadership, quite apart from the value of the herbarium as a regional reference collection.

ABRS has given financial support to four grants for taxonomic work in the Botany Department totalling \$57,000. In recent years Dr Jeremy Bruhl has received the majority of these funds

for systematic studies on important Australian flora groups. However we should recognise that the main Government support has been from the Tertiary Education budget.

ABRS, itself, is only part of a much bigger picture. It was just five years ago – in June 1992 – that Australia joined with the nations of the world at the United Nations Conference on Environment and Development in Brazil. There in Rio – along with about 150 other countries – we signed the Convention on Biological Diversity, in which we committed ourselves not only to preparing a comprehensive inventory of our biodiversity but also to conserving our biological resources and using them in a sustainable manner. This is proving to be no easy task, but it is of crucial importance for meeting the food, health and other needs of growing world populations, and for future generations of Australians.

I am pleased to announce that in recognition of the good work of the ABRS it has been chosen to edit and publish the first two volumes of 'Species Plantarum' – the World Flora, using external funding.

Today the Commonwealth Government is working to integrate policies and programs for rural production and national resources management to restore degraded lands, conserve soil and biota, and achieve fully sustainable land use in Australia. We have seen some very encouraging progress, especially through the Landcare movement, but there is still a long way to go. Often the politics of the situation gets more exposure than the science, but the science is fundamental to the outcome. The lack of taxonomic knowledge of our flora and fauna – and the limited availability of the knowledge we do have – are still serious

handicaps to this work, although ABRS is making a steady impact on removing them. A strong and continuing program of scientific studies of the flora and fauna in our universities and other national research institutions is absolutely imperative as a basis for applied studies in land use, resource conservation, and primary production.

I am confident that this impressive new building will give a major boost to flora research at UNE. Ladies and gentlemen, I have much pleasure in declaring the N.C.W. Beadle Herbarium open.

***Alison Russell-French***

*Director*

*Australian Biological Resources Study*

*[Forwarded by Tony Orchard, 28 August]*

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## **A FLORA OF THE NT'S COASTAL FLOODPLAINS**

Some of the great experiences of a visit to the floodplains must include their calm and majesty during the wet season, the peaceful honking of a great cloud of magpie geese around a drying swamp, the speed and agility of a saltwater crocodile catching mullet, or the freshness of a *Nelumbo* fringed billabong in the early morning calm. For me it is these special things that have helped keep me in the north. As a botanist working and recreating in the wetlands, one thing that has stood out is the lack of any guide to the flora of these special places. Others have felt the need as well - wetland ecologists, zoologists, visiting scientists and tour guides to name a few. Partly in response to these needs, partly for our own satisfaction we (Philip Short, Clyde Dunlop, Monica Osterkamp and myself) have been working on a flora of the NT's coastal

flood plains - effectively systems of seasonally inundated freshwater swamps and permanent billabongs. These systems are a major feature of the region and are associated with larger creeks and rivers from the Moyle River in the west to the Koolatong River in northeast Arnhem Land. They are probably the most extensive wetland systems in northern Australia and rate highly on a world scale. Those occurring in Kakadu NP and in Gurig NP have been listed as wetlands of international importance (Ramsar agreement).

Such wetlands are places of extremes. Some of these flood plains can be covered with luxuriant plant growth in 2 m of water during the wet and by the late dry be bare plains of baked, cracked clay where men have died of thirst. These extremes also test plants and divide the flora into essentially two groups: those which grow and reproduce during the flooded phase and those that flourish during the drying out (or mud flat) phase and persist or die during the wet. For this flora, plants growing during both the wet and dry phases on annually or permanently inundated parts of the northern flood plains are included. The format is to be similar to the *Flora of the Darwin Region* series (of which the second part is published). A total of 41 plates of black and white line drawings are to be included, with each species illustrated. Introductory chapters will give an overview of the floodplains and their geomorphology, vegetation and ecology. Descriptions of most of the approximately 280 species are complete with preparation of the illustrations by Monica Osterkamp, well advanced. The largest families are the Cyperaceae and Poaceae with over 100 species between them. The remainder of species are from a wide variety of families (69 in all), including the strictly aquatic such as Menyanthaceae, Nymphaeaceae and Hydrocharitaceae to mud flat dwellers (e.g.

Asteraceae) and emergent trees (e.g. *Melaleuca* and *Barringtonia*). Publication is due for 1998.

**Ian Cowie**

DNA

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## E-MAIL FOR MEL

MEL botanists have new e-mail addresses. For each botanist this is formed by taking the first initial and surname (no full stop between them) and adding @rbgmelb.org.au. For example:

nwalsh@rbgmelb.org.au

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## E-MAIL AND FAX FOR AD

Email addresses at AD now all have the following form:

rbarker@denr.sa.gov.au

The herbarium fax number is: (08) 8215 0078.

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## AN EDITORIAL COMMENT—3. WHO NEEDS WHAT?

How often do we read that a genus needs revision, that a little-known area needs surveying, that better specimens need to be collected, that a book or some such data need updating? Correctly, none of these subjects needs any such thing; they are quite content as they are. The need is a human condition. Better to say that the genus should be revised, or that we need to update these data, etc.

**Alex George**

'Four Gables',

18 Barclay Road,

Kardinya, Western Australia 6163

## PERCEPTIONS

### *James Drummond*

*'... a great-boned, brawny Scott, with snow-white hair and beard, – and as active as ever, and as enthusiastic in his pursuit as possible.'*

**William Harvey**

Letter to W. J. Hooker, 19 May 1854

### *Clyde Dunlop*

*'... a wombat of a man with just the right mix of dry humour, strategic skills and inner calm.'*

**A. Burdon**

Australian Geographic 47: 51 (1997)

### *Ferdinand Mueller*

*'... a first-rate botanist, but an absurd and crotchety man in reference to landscape gardening.'*

**Mr Vale, Victorian MP**

Victorian parliamentary debates 1872

### *Augustus Frederick Oldfield*

*'I got much interested in him – he was always gloomy and odd.'*

**J. D. Hooker**

Letter to Mueller, 2 Dec. 1885

### *William Swainson*

*'I cannot say that I gave to our Secretary for the Colonies an equally flattering account of Mr Swainson on the Gum Trees!!! In my life I think I never read such a series of trash and nonsense. There is a man who left this country with the character of a first rate naturalist (though with many eccentricities) and of a very first-rate Natural History artist and he goes to Australia and takes up the subject of Botany, of which he is as ignorant as a goose.'*

**W. J. Hooker**

Letter to Mueller, 9 April 1854

## BOOK REVIEWS

**Malesian Seed Plants. Volume I—spot-characters. An aid for identification of families and genera.**

M. M. J. van Balgooy.

*Publisher* Rijksherbarium/Hortus Botanicus, Leiden. *Orders to* Backhuys Publishers, PO Box 321, 2300 AH Leiden, The Netherlands [*Fax* 31 71 5171856. *Email* backhuys@euronet.nl].

*ISBN* 90-71236-31-5. *Specifications* softcover, 238 mm x 159 mm, 154 pp., line-drawings.

*Retail price* Dfl. 50.00.

This is the first of a projected three volume work on Malesian seed plants; the second and third volumes will be family portraits of tree and non-tree families respectively. The 105 spot characters in this volume cover 12 categories: habit (13 states), stem or branch (5), exudate (4), smell (2), indument (6), leaves with glands (1), petiole/rachis (6), lamina (26), inflorescence (9), flower (14), fruit (9), seed (4). Each state has a sentence or two of explanation plus a list of families, genera and occasionally species, which exhibit the character. States are illustrated, often with more than one example taken from published revisions and other sources. Geographic scope is essentially Malesian though some Pacific and Australian taxa are included.

The majority of characters are traditional spot characters used for sorting specimens, compiled over the years by Max van Balgooy but based on the collective knowledge of such notabilities as C. G. G. J. van Steenis, R. C. Bakhuizen van den Brink Jr and F. H. Hildebrand. The author, pressed by his colleagues to publish this work suggests in his introduction that publication may be premature.

I would agree with his advisers; there are corrections, refinements and elaborations which could be made but my immediate response after flicking through the pages was that such information should be made available as soon as possible. Ecologists, foresters and naturalists in the Malesian region would surely agree. The desperate need for identification aids for this complex flora is underlined by Prof. Rifai who points out, in his preface to the book, that of the estimated 36,000 species in Malesia, a mere 15% are treated in FM.

The characters, according to the author, have all been defined by the Rijksherbarium botanists without any recourse to the literature. Botanists familiar with the spot characters of Hutchinson (1959, 1967) and Metcalf and Chalk (1950, 1979, 1983) would probably wonder why this great pool of information has not been utilised. Even so, the book has a wealth of data on (mostly) macro characters, micro characters such as hair types, one anatomical feature (ruminate endosperm), various field characters and attributes such as parasitism.

Readers are invited to submit additions and corrections for a future edition and I predict that the most common suggestion would be the production of an interactive key along the lines of Hyland & Whiffin (1993). Balgooy himself mentions the enormity of the task which confronted him and other young botanists of remembering all the detail of what amounts to be the accumulated wisdom of the Rijksherbarium. A multi-entry key is the only practical way of dealing with the approximately 1560 taxa linked to one or more of the 105



characters in the book. An electronic product would also permit a greater use of Leiden's abundant resource of illustrations and allow for frequent and affordable upgrades.

There is no doubt, as the author acknowledges, that the data could be improved upon; in the meantime, it provides an excellent first step towards building character sets for the Malesian flora and I am sure users in the region will find the volume useful and be inspired to contribute improvements as invited by the author.

**Clyde Dunlop**

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- Hyland, B. P. M. & Whiffin, T. (1993) Australian Tropical Rain Forest Trees, An interactive identification system. (CSIRO: Melbourne)
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- Metcalf, C. R. & Chalk, L. (1983). Anatomy of the Dicotyledons, Volume 2. 2nd ed., 297 pp., 11 plates. (OUP: Oxford).

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**Black nightshades: *Solanum nigrum* L. and related species.** J. M. Edmonds & J. A. Chweya. IPGRI (Int. Plant Genet. Res. Inst.) Handbook No. 15, Rome, 1997, 113 pp. (papercover). Price not indicated.

Nightshades are with us all. This must be amongst the most widespread cluster of species in the world. From cool temperate areas to the tropics wherever man disturbs the landscape nightshades seem to follow. In Australia we know them as weeds with a reputation for toxicity which may be exaggerated. It will surprise many to know that they are minor food plants used in the Pacific, Asia and widely in Africa and to a lesser extent the Americas. No cultivars have yet been developed through conventional plant breeding methods, but local variants have been selected in some areas.

Because of their widespread use IPGRI have produced this handbook in their series on under utilised and neglected crops. They could not have chosen a better author than J. M. Edmonds who has an enviable record of research in these species. She writes authoritatively, simply, no jargon, no beating about the bush. What is known is stated and what is unknown or needs research is not glossed over. The principal chapters deal with taxonomy, origins, properties, genetic resources, breeding, ecology and agronomy, potential, limitations and research requirements. There are over 200 references, a substantial list of research contacts and of available gene banks. There is a key to species commonly found in Eurasia and many illustrations.

Dr Edmonds stresses that this is not a taxonomic monograph. It is true the emphasis is on Eurasia and Africa and that the Americas get less attention yet anyone having to deal with these species will find this a comprehensive, inherently sensible, up-to-date reference to these ubiquitous plants.

**David E. Symon**

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**Freshwater Algae in Australia. A guide to conspicuous genera.** T. J. Entwisle, J. A.

Sonneman & S. H. Lewis. *Publisher & orders to* Sainty & Associates Pty Ltd, PO Box 1219, Potts Point, NSW 2011, Australia [Fax (02) 93315372; international: 61-2-9331 5372.

Email [geoff@sainty.com.au](mailto:geoff@sainty.com.au)]. ISBN 0 646 31408

4. *Specifications* 204 mm x 128 mm, 242 pp., c.

300 colour photographs plus free-hand

illustrations. *Retail price* (Australian dollars, including postage & packaging within

Australia): hardcover \$49.95, softcover \$36.95.

This is an excellent work and will be invaluable to anyone - amateur, student or professional biologist - requiring a guide to the genera of freshwater algae that occur in Australia. Of the 400 or so genera of freshwater algae that occur in Australia 96 are covered - all genera of macroalgae and the most common genera of microalgae likely to be encountered.

The book commences with some introductory notes on the following: using the book; the divisions of algae encountered in Australia; algal habitats; collection, preservation and storage of algae; microscopy; algal blooms; algal weeds; rare and threatened algae.

Pages 20-29 are devoted to a pictorial key which initially sorts taxa into ten different groups and three genera on the basis of easily seen characteristics, e.g. non-motile unicells, motile unicells, unbranched filaments, whorls of small branches. Each group is then treated separately, and the clear drawings of diagnostic features of each genus should normally enable ready identification.

The broad groupings recognised in the initial key are colour-coded and these same groups and codings are used in the main text; the

codings occur on the outer margins of the photograph page and are readily visible when flicking through the book. This means that the more detailed key can be easily skipped over, the user examining the mostly excellent photographs that adorn this work to identify a member of any one group. It is very much a well-presented, 'user-friendly' book.

The main text for each genus is spread over two pages, the left-hand page being devoted to notes on habitat, colour, habit, microscopic features, classification, species and distribution, notes and similar taxa. The right-hand page is devoted mostly to colour photographs of the subject, line drawings being used if photographs were unavailable.

Pages 222-225 are devoted to a glossary and pp. 226-236 to references for anyone wishing to pursue further information on a genus and its component taxa.

One aspect of the book that should be mentioned is the fact that many of the genera are cosmopolitan in distribution. Therefore this work has application outside of Australia. Indeed, both Australian and non-Australian lecturers running courses in limnology should find this book invaluable.

The three authors, and Enid Mayfield who was responsible for the freehand drawings, are to be congratulated for producing such a fine guide.

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**Philip Short**

**The Tree of Liff.** Brendan Lepschi. *Better Than You Productions.* Published August 1997. 32 pp. Price \$5.00, available from the author.

*The Tree of Liff* is meant to make us laff, and in

general it succeeds admirably. It takes 83 generic names of plants and, to quote the Introduction, defines them as 'words for the various situations, objects and experiences encountered by botanists in their rich and exciting daily lives.' All of us will relate to some or many of these definitions. I confess to being, at times, a *Tweedia* (currently without *Velvetiae*) but I hope I have never been a *Dandya*.

The list of Contents is quite intriguing, presumably designed for those who have difficulty remembering the alphabet (is that the next stage in the deterioration of teaching English?).

Some interpretations are questionable. For example, I would have thought that *Halodule* might be a particular measurement of a religious collector (see *Bubbia*).

Omissions are few. A synonym of *Liquidambar* is not there (*Lagerstroemia*). I would like to have seen *Oblivia*, (n., one who, on entering a herbarium wing, cannot remember why they came there), *Austrocactus* (adj., any broken piece of southern hemisphere collecting equipment that is no longer useful), *Pseudodracontium* (n., a herbarium label that tells you what is obvious from the specimen, e.g. 'herb 6 cm tall', but nothing else), and *Cladopus* (n., a systematist who produces endless trees of dubious value but, unlike the namesake, does not climb them; fortunately there is a proposal to eradicate cats by the year 2000).

No new names are published, but Lepschi does not explain whether his use of names treated as synonyms in other places (e.g. *Polypompholyx*) has any taxonomic significance. I noticed no typographical errors, but a few apostrophes are missing.

I look forward to a companion work on specific epithets, followed by one on common names.

**Alexgeorgea** (n., a compulsive contributor to the ASBS Newsletter),  
'Four Gables',  
18 Barclay Rd,  
Kardinya, W.A. 6163

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**Checklist of the Mosses of Banks Peninsula, New Zealand.** B. H. Maemillan. *Publisher &—orders to* Manaaki Whenua Press, PO Box 40, Lincoln 8152, New Zealand [Fax +64 3 325 2127. Email [comfort@landcare.cri.nz](mailto:comfort@landcare.cri.nz)].  
*Published* December 1996. ISBN 0 478 09302 0. *Specifications* softcover, 210 mm x 147 mm, 80 pp., 3 b&w photographs, 1 drawing, 1 map. *Retail price* (NZ\$, including postage & packaging, for Australian and NZ customers, US\$ elsewhere): \$25.00. Payment with order or credit card (Visa, Bankcard, Mastercard) accepted.

This publication is No. 17 in the Landcare Research Science Series and is the first checklist to be published on the mosses of Banks Peninsula. The title is perhaps misleading in that this is not merely a listing of names. It is an *annotated* checklist and, although the bulk of the book is taken up with the list, pages 5–14 also includes notes on the physical features of Banks Peninsula, as well as climate, vegetation (mainly lists of the common mosses to be found in forest, shrubland, aquatic habitats, etc.) and endemism (one moss species only).

Pages 15–68 contain the species list, with 234 species and four varieties included. The arrangement of families follows 'A Dictionary of Mosses' by Crosby & Magill (1978) and nomenclature and species concepts follow

'Checklist of the Mosses of New Zealand' by Fife (1995). Genera and species are arranged alphabetically within families. Each taxon entry includes synonymy, habitat notes (from collections housed in CHR & CANU), herbarium voucher and reference to the earliest published record. Additional comments on variation and classification are sometimes included. The following is a fairly typical entry:

***Hennediella macrophylla* (R. Br. ter.) Par.**

Syn. *Pottia macrophylla* (R. Br. ter.) Sainsb.

HABITAT: OPEN SITES: sun-baked vertical silt bank beside track; dry clay bank beside track, in grazes *Leptospermum* scrub; dry silt bank beside road influenced by eutrophied seepage from pasture; on earth at base of steep face.

VOUCHER: CHR 349495.

FIRST RECORD: Brown (1893b), as *Hennedia intermedia* sp. nov.; Beckett (1893a), as *Pottia marginata* sp. nov.

records are substantiated by reference to vouchers.

...

The above work by Bryony Macmillan is just one of many New Zealand science books published by Manaaki Whenua Press, part of Manaaki Whenua – Landcare Research New Zealand Ltd, and their catalogue can be viewed on the World Wide Web:

<http://www.landcare.cri.nz/mwpress>

One aspect of note is that publication of the *Flora of New Zealand Volume V*, which will deal with the native and naturalised grasses, is planned for next year.

**Philip Short**

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Publications referred to in the text are all gathered in a general 'References' section on pages 70–75. An index to species concludes the work.

The original places of publication of names are not provided in the checklist. Their inclusion may have made the work that little more useful.

This publication may not be of interest to many readers of the *ASBS Newsletter* in that it does not concern flowering plants and is not focused on Australia. However, apart from the exclusion of the places of original publication (and their requirement is debatable), it is an excellent example of what a checklist should be. It is not just a list of names. It brings together and critically examines the work of previous botanists and collectors, and most importantly,

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## A.S.B.S. PUBLICATIONS

### **History of Systematic Botany in Australia**

Edited by P.S. Short. A4, case bound, 326pp. A.S.B.S., 1990.

\$30; plus \$10 p. & p.

For all those people interested in the 1988 A.S.B.S. symposium in Melbourne, here are the proceedings. It is a very nicely presented volume, containing 36 papers on: the botanical exploration of our region; the role of horticulturists, collectors and artists in the early documentation of the flora; the renowned (Mueller, Cunningham), and those whose contribution is sometimes overlooked (Buchanan, Wilhelmi).

### **Systematic Status of Large Flowering Plant Genera**

A.S.B.S. Newsletter Number 53, edited by Helen Hewson. 1987. \$5 + \$1.10 postage.

This Newsletter issue includes the reports from the February 1986 Boden Conference on the "Systematic Status of Large Flowering Plant Genera". The reports cover: the genus concept; the role of cladistics in generic delimitation; geographic range and the genus concepts; the value of chemical characters, pollination syndromes, and breeding systems as generic determinants; and generic concepts in the Asteraceae, Chenopodiaceae, Epacridaceae, *Cassia*, *Acacia*, and *Eucalyptus*.

### **Evolution of the Flora and Fauna of Arid Australia**

Edited by W.R. Barker & P.J.M. Greenslade. A.S.B.S. & A.N.Z.A.A.S., 1982. \$20 + \$5 postage.

This collection of more than 40 papers will interest all people concerned with Australia's dry inland, or the evolutionary history of its flora and fauna. It is of value to those studying both arid lands and evolution in general. Six sections cover: ecological and historical background; ecological and reproductive adaptations in plants; vertebrate animals; invertebrate animals; individual plant groups; and concluding remarks.

### **Ecology of the Southern Conifers**

Edited by Neal Enright and Robert Hill.

ASBS members: \$60 plus \$12 p&p non-members \$79.95.

Proceedings of a symposium at the ASBS conference in Hobart in 1993. Twenty-eight scholars from across the hemisphere examine the history and ecology of the southern conifers, and emphasise their importance in understanding the evolution and ecological dynamics of southern vegetation.

### **Australian Systematic Botany Society Newsletter**

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Tel: (08) 8999-4512

### Hobart

Bob Hill  
Department of Plant Science  
University of Tasmania  
Hobart, Tas. 7000  
Tel: (002) 202-601

### Armidale

Jeremy Bruhl  
Department of Botany  
University of New England  
Armidale, NSW 2351  
Tel: (067) 973-2429

### Melbourne

Marco Duretto  
National Herbarium of Victoria  
Birdwood Avenue  
South Yarra, Vic. 3141  
Tel: (03) 9252 2300  
e-mail: mduretto@rbgmelb.org.au

### Brisbane

Laurie Jessup  
Queensland Herbarium  
Meiers Road  
Indooroopilly, Qld 4068  
Tel: (07) 3896-9320

### Perth

Jenny Chappill  
Department of Botany  
University of Western Australia  
Nedlands, WA 6009  
Tel: (09) 380-2212

### Canberra

Lindy Cayzer  
Australian National Herbarium  
GPO Box 1600  
Canberra, ACT 2601  
Tel: (02) 6246-5499

### Sydney

Peter Jobson  
National Herbarium of New South Wales  
Mrs. Macquaries Road  
Sydney, NSW 2000  
Tel: (02) 9231-8131

### Darwin

Clyde Dunlop  
Northern Territory Herbarium  
Parks & Wildlife Commission of the NT

### Telephone and Fax Numbers for Major Australian Herbaria

International dialing sequence from outside Australia:-  
add the Australian country code 61 and omit the leading zero of the area code.

<b>AD</b> Ph: (08) 8228 2311 Fax: (08) 8215 0078	<b>BRI</b> Ph: (07) 3896 9321 Fax: (07) 3896 9624	<b>HO</b> Ph: (03) 622 62635 Fax: (03) 6226 7865	<b>MBA</b> Ph: (070) 928 445 Fax: (070) 923 593
<b>CANB</b> Ph: (02) 6246 5108 Fax: (02) 6246 5249	<b>CBG</b> Ph: (02) 6250 9450 Fax: (02) 6250 9599	<b>MEL</b> Ph: (03) 9252 2300 Fax: (03) 9252 2350	<b>NSW</b> Ph: (02) 9231 8111 Fax: (02) 9251 7231
<b>DNA</b> Ph: (08) 8999 4516 Fax: (08) 8999 4527	<b>FRI</b> Ph: (06) 281 8211 Fax: (06) 281 8312	<b>PERTH</b> Ph: (09) 334 0500 Fax: (09) 334 0515	<b>QRS</b> Ph: (070) 911 755 Fax: (070) 913 245

### ABRS

Fax:	(02) 6250 9448 publications;	(02) 6250 9555 grants
Phone:	(02) 6250 9442 A.E. Orchard;	(02) 6250 9443 Ian Creswell
Email:	tony.orchard@dest.gov.au	ian.creswell@dest.gov.au

This list will be kept up to date, and will be published in each issue.  
Please inform us of any changes or additions.







# AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

## The Society

The Australian Systematic Botany Society is an incorporated association of over 300 people with professional or amateur interest in botany. The aim of the Society is to promote the study of plant systematics.

## Membership

Membership is open to all those interested in plant systematics. Membership entitles the member to attend general meetings and chapter meetings, and to receive the *Newsletter*. Any person may apply for membership by filling in an "Membership Application" form and forwarding it, with the appropriate subscription, to the treasurer. Subscriptions become due on January 1 each year.

## The Newsletter

The *Newsletter* appears quarterly, keeps members informed of Society events and news, and provides a vehicle for debate and discussion. In addition, original articles, notes and letters (not exceeding ten published pages in length) will be considered.

Contributions should be sent to one of the editors at the address given below. They should preferably be submitted as:- an unformatted word-processor or ASCII file on an MS-DOS or Macintosh diskette, accompanied by a printed copy; as an unformatted word-processor or ASCII email file, accompanied by a fax message reporting the sending of the file; or as two typed copies with double-spacing if less than one page.

The deadline for contributions is the last day of February, May, August, and November.

All items incorporated in the *Newsletter* will be duly acknowledged. Authors alone are responsible for the views expressed, and statements made by the authors do not necessarily represent the views of the Australian Systematic Botany Society Inc. *Newsletter* items should not be reproduced without the permission of the author of the material.

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## Editors

Philip Short .....	(08) 89994514
Email .....	philip.short@nt.gov.au
Greg Leach .....	(08) 89815826
Email .....	greg.leach@nt.gov.au
Ian Cowie .....	(08) 89994511
Email .....	iah.cowie@nt.gov.au
Clyde Dunlop .....	(08) 89994512
Email .....	clyde.dunlop@nt.gov.au

## Postal Address

N.T. Herbarium  
Parks & Wildlife Commission of the N.T.  
P.O. Box 496  
PALMERSTON NT 0831

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